

i. Proposal number.# 2001-F-214*

ii. Short proposal title .# Patterns of Hg and MeHg in Tidal Wetland Ecosystems*

APPLICABILITY TO CALFED ERP GOALS AND IMPLEMENTATION PLAN

1a1. Link to ERP Strategic Goals: What Strategic Goal(s) is /are addressed by this proposal? List the letter(s) of all that apply.

A. At-risk species

B. Rehabilitate natural processes

C. Maintain harvested species

D. Protect-restore functional habitats

E. Prevent non-native species and reduce impacts

F. Improve and maintain water quality# A, B, C, D, F*

1a2. Describe the degree to which the proposal will contribute to the relevant goal. Quantify your assessment and identify the contribution to ERP targets, when possible.#

Goal A - The proposal contributes significantly to this goal. Direct investigation on clapper rail, an endangered species. Benefits extend to lower trophic levels (bivalves, amphipods, crayfish) that will also be investigated. Other target fish species that will be evaluated are inland silversides, staghorn sculpin, prickly sculpin, yellowfin goby. Inland silversides have been found to be an effective indicator of mercury distribution.

Goal B - The proposal contributes significantly to this goal by providing information on seasonal and interannual variation in flow and contaminant loads on Hg geochemistry and bioaccumulation.

Goal C - The proposal contributes significantly to this goal. The investigation is directed on striped bass.

Goal D - This proposal would contribute significantly to the information used to make shallow water habitat restoration decisions.

Goal F - Contributes significantly to this goal by providing needed information on Hg and MeHg in water, sediments and biota. This information will assist in evaluating water quality and aquatic toxicity.

ERP Targets 19 (reduce contaminants toxic to fish and wildlife in Suisun Marsh and S.F. Bay) - This study directly supports this ERP Target *

1b. Objectives: What Strategic Objective(s) is/are addressed by this proposal? List Objective (from the table of 32 objectives) and describe potential contribution to ERP Goals. Quantify your assessment, when possible.# Goal A Objectives 2,3 - The information from this will be used to address these objectives, specifically for the recovery of the clapper rail.

Goal B, Objectives 2,3 - The information from this study will be used to evaluate the impacts of Hg and MeHg on different species in tidal marsh areas. The information from this study will assist in decisions on food web productivity and creation of shallow water habitat.

Goal C, Objective 3 - The striped bass data from this study will assist in maintaining fisheries for striped bass.

Goal D, Objective 1 - This proposal will contribute significantly to this objective.

Goal F, Objective 1 - The information from the proposal will contribute significantly to the objective of reducing the loads and concentrations of toxic contaminants into the Bay-Delta.*

1c. Restoration Actions: Does the proposal address a Restoration Action identified in Section 3.5 of the PSP? Identify the action and describe how well the proposed action relates to the identified Restoration Action.

Restoration Action #1 (Natural Flow Regimes)- This proposed study will assist in better understanding of biological/chemical responses of Hg and MeHg to variable flows.

Restoration Action#5 (Shallow Water, Tidal Marsh Habitat) - The study specifically addresses tidal marshes and the information will be used to in the decision making process for restoration of existing and creation of new tidal marsh habitat.

Restoration Action #6 (Contaminants in the Central Valley) - The proposal is related to this restoration action. Data for this study would be used to evaluate reduction measures for Hg.*

1d. Stage 1 Actions: Is the proposal linked directly, indirectly or not linked to proposed

Stage 1 Actions? If linked, describe how the proposal will contribute to ERP actions during Stage 1.# Ecosystem Restoration

State 1 Action #8 (targeted research to resolve high priority issues) - This project is strongly linked to this Stage 1 action.

Environmental Water Quality

Stage 1 Action #4 (mercury evaluation and abatement) - The proposal directly addresses and will contribute significantly to the following actions under Stage 1 Action #4. Provides research on methylation process in Delta (tidal wetlands). Provides information that will be used to determine impacts of ecosystem restoration on MeHg levels. Investigates MeHg in lower and higher trophic level organisms.*

1e. MSCS: Describe how the proposal is linked to the Multi-Species Conservation Strategy and if it's consistent with the MSCS Conservation measures. Identify the species addressed and whether the proposal will

"recover", "contribute to recovery" or "maintain" each species.# This project would contribute to the recovery of the clapper rail and is consistent with the MSCS.*

1f. Information Richness/Adaptive Probing related to the proposal: Describe the degree to which the proposal provides information to resolve one of the 12 scientific uncertainties (Section 3.3 of the PSP), and whether the proposal offers a prudent approach to answer these uncertainties.

Scientific Uncertainty #3 (Decline in Productivity) - Yes, the proposal would provide significant information about impacts of Hg and MeHg on biota. The proposal offers a prudent approach.

Scientific Uncertainty #10(Shallow Water Habitat, Tidal and Freshwater Marsh Habitat). - The proposal would contribute significantly to needed information about tidal marshes and the distribution of Hg and MeHg in water, sediment and biota. Tidal marshes are critical habitat for many species (both endangered

and those valued for sport/commercial value). The information will be useful for planning and decision making in the CALFED Delta habitat restoration projects.

Scientific Uncertainty #11 (Contaminants through the Central Valley) - The proposal would contribute significantly to needed water quality information. The proposal will provide data that will describe the distribution of Hg and MeHg in water, sediment and biota in tidal marshes.*

1g. Summarize comments from section 1a through 1f related to applicability to CALFED goals and priorities. Identify the strengths and weaknesses of the proposal, highlighting the applicability of the proposed project to CALFED and CVPIA goals and priorities. Focus on aspects of the proposal that may be important to later stages in the project review and selection process.# Strengths

This study would provide needed information to fill current data gaps for Hg, MeHg in tidal marshes.

Weaknesses

The conceptual model and approach sound too similar. No section to discuss specific tasks; many of the tasks are embedded in the approach. A better presentation of the specific project tasks as they relate to the spreadsheet would have been more useful.*

APPLICABILITY TO CVPIA PRIORITIES

1i. Describe the expected contribution to natural production of anadromous fish. Specifically identify the species and races of anadromous fish that are expected to benefit from the project, the expected magnitude of the contribution to natural production for each species and race of anadromous fish, the certainty of the expected benefits, and the immediacy and duration of the expected contribution. Provide quantitative support where available (for example, expected increases in population indices, cohort replacement rates, or reductions in mortality rates).# The study design includes a lower trophic level contamination task that could yield information of relevance to anadromous fish that rear in North Bay tidal wetland channels (e.g., striped bass or possibly chinook salmon). A better understanding of the factors that promote transfer of methylmercury up the food web to rearing anadromous fish would help avoid unintended negative consequences of wetland restoration projects proposed for this part of the estuary. The main focus of the study, however, is on clapper rails.*

1j. List the threatened or endangered species that are expected to benefit from the project. Specifically identify the status of the species and races of anadromous fish that are expected to benefit from the project, any other special-status species that are expected to benefit, and the ecological community or multiple-species benefits that are expected to occur as a result of implementing the project.# Clapper rail. Multiple-species benefits would result from this study because it would provide data on factors regulating mercury methylation and biomagnification in a part of the system that previous mercury studies have not focused on. *

1k. Identify if and describe how the project protects and restores natural channel and riparian habitat values. Specifically address whether the

project protects and restores natural channel and riparian habitat values, whether the project promotes natural processes, and the immediacy and duration of benefits to natural channel and riparian habitat values.# The project would support natural channel and riparian habitat values by providing information that might help avoid or minimize the extent to which tidal wetland restoration actions in the North Bay increase the production and bioaccumulation of methylmercury in the Bay's foodweb.*

1l. Identify if and how the project contributes to efforts to modify CVP operations. Identify the effort(s) to modify CVP operations to which the proposed project would contribute, if applicable. Efforts to modify CVP operations include modifications to provide flows of suitable quality, quantity, and timing to protect all life stages of anadromous fish as directed by Section 3406 (b)(1)(B) of the CVPIA, including flows provided through management of water dedicated under Section 3406(b)(2) and water acquired pursuant to Section 3406(b)(3).# There is a remote chance that CVP operations could be affected by the results of this study if mercury loads that accompany CVP reservoir releases vary substantially among catchments.*

1m. Identify if and how the project contributes to implementation of the supporting measures in the CVPIA. Identify the supporting measure(s) to which the proposed project would contribute, if applicable. Supporting measures include the Water Acquisition Program, the Comprehensive Assessment and Monitoring Program, the Anadromous Fish Screen Program, and others.# Possibly b(1) other.*

1n. Summarize comments from section 1i through 1m related to applicability to CVPIA priorities (if applicable, identify the CVPIA program appropriate to consider as the source of CVPIA funding [for example, the Anadromous Fish Restoration Program, Habitat Restoration Program, Water Acquisition Program, Tracy Pumping Plant Mitigation Program, Clear Creek Restoration Program, Comprehensive Assessment and Monitoring Program, and Anadromous Fish Screen Program]). Identify the strengths and weaknesses of the proposal, highlighting the applicability of the proposed project to CALFED and CVPIA goals and priorities. Focus on aspects of the proposal that may be important to later stages in the project review and selection process.# This project would provide only marginal benefits to anadromous fish because its main focus is on clapper rails. It may qualify for funding under the "b(1) other" program of the CVPIA although it is probably outside the geographic scope usually encompassed by CVPIA-funded projects.*

RELATIONSHIP TO OTHER ECOSYSTEM RESTORATION PROJECTS

2a. Did the applicant explain how the proposed project relates to other past and future ecosystem restoration projects, as required on page 57 in the

PSP? Type in yes or no.# yes*

2b. Based on the information presented in the proposal and on other

information on restoration projects available to CALFED and CVPIA staff, describe how the proposed project complements other ecosystem restoration projects, including CALFED and CVPIA. Identify projects or types of projects that the proposed project would complement, now or in the future.

Identify source of information.# Development of methods to increase dissolved oxygen are critical to several restoration projects upstream of the DO depression -in Stanislaus, Calaveras, Merced, and Tuolumne Rivers projects designed to improve salmon migration and spawning habitat. This is second year funding for the work. Will collaborate or integrate with other San Joaquin River projects to avoid duplication of effort, including a tagging study of fish migration past the low DO concentration, DOC studies as part of 99B06, and real-time water quality projects on the San Joaquin River and Grasslands areas.
Information source: Proposal*

RESULTS AND PROGRESS ON PREVIOUSLY FUNDED CALFED AND CVPIA PROJECTS, INCLUDING REQUESTS FOR NEXT-PHASE FUNDING

3a1. Based on the information presented in the proposal and on project reports and data available to CALFED and CVPIA staff, has the applicant previously received CALFED or CVPIA funding? Type CALFED, CVPIA, both, or none .# CALFED*

3a2. If the answer is yes, list the project number(s), project name(s) and whether CALFED or CVPIA funding. If the answer is none, move on to item 4.# 99B16 - Dissolved Oxygen in the San Joaquin River*

3b1. Based on the information presented in the proposal and on project reports available to CALFED and CVPIA staff, did the applicant accurately state the current status of the project(s) and the progress and accomplishments of the project(s) to date? Type yes or no.# yes*

3b2. If the answer is no, identify the inaccuracies:##

3c1. Has the progress to date been satisfactory? Type yes or no.# yes*

3c2. Please provide detailed comments in support of your answer, including

source of information (proposal or other source):# Most DWR projects are underway and progressing. Project initially delayed due to contracting issues. Project is on track and making significant progress
Information source: CALFED tracking table, personal experience on contracting issues, CALFED progress reports.*

REQUESTS FOR NEXT-PHASE FUNDING

3d1. Is the applicant requesting next-phase funding? Type yes or no.# yes*

3d2. If the answer is yes, list previous-phase project number(s) here. If the answer is no, move on to item 4.# 99B16*

3e1. Does the proposal contain a 2-page summary, as required on pages 57 and 58 of the PSP? Type yes or no.# yes*

3e2. Based on the information presented in the summary and on project reports available to CALFED and CVPIA staff, is the project ready for next-phase funding? Type yes or no.# yes*

3e3. Please provide detailed comments in support of your answers, including source of information (proposal or other source):# Although contract for year one Phase was not completed until May work on the project began in April 2000. Initial work is ongoing and on schedule. Given that they will need to continue with the project for the full three years, they should be ready for second year funding by early 2001. Information source: Proposal*

LOCAL INVOLVEMENT

4a. Does the proposal describe a plan for public outreach, as required on page 61 of the PSP? Type yes or no.# Yes.*

4b. Based on the information in the proposal, highlight outstanding issues related to support or opposition for the project by local entities including watershed groups and local governments, and the expected magnitude of any potential third-party impacts.# No opposition or third party impacts.*

ENVIRONMENTAL COMPLIANCE

4d. List any potential environmental compliance or access issues as identified in the PSP checklists.# Need to comply with CEQA so lead agency can determine if it is a project. They need to consult with ESA for fish and invertebrate monitoring because they are sampling in areas where there is potential of collecting threatened and endangered species.*

4e. Specifically highlight and comment on any regulatory issues listed above that may prevent the project from meeting the projected timeline.#None*

COST

5a. Does the proposal include a detailed budget for each year of requested support? Type yes or no.#yes*

5b. Does the proposal include a detailed budget for each task identified? Type yes or no.# yes*

5c. Is the overhead clearly identified? Type yes or no.# yes*

5d. Are project management costs clearly identified? Type yes or no.# yes*

5e. Please provide detailed comments in support of your answers to questions 5a - 5d.# All information requested has been provided by project proponent in a clear, concise, and understandable format.*

COST SHARING

6a. Does the proposal contain cost-sharing? Type yes or no.# no*

6b. Are applicants specifically requesting either state or federal cost share dollars? Type state, federal, or doesn't matter.# federal*

6c. List cost share given in proposal and note whether listed cost share is identified (in hand) or proposed.

6c1. In-kind:# n/a*

6c2. Matching funds:# n/a*

6c3. Show percentage that cost sharing is of total amount of funding requested along with calculation.# n/a*

6d. Please provide detailed comments in support of your answers to questions 6a - 6c3.# n/a*